

Appropriations Committee Testimony  
President Susan Herbst  
University of Connecticut  
-February 2013-

Senator Harp, Representative Walker, Senator Kane, Representative Miner, and members of the Committee:

Thank you for having us here today and for all your support of the University of Connecticut. Your tremendous investments in UConn are the reason we are a top choice for Connecticut residents, and ranked 21<sup>st</sup> among public research universities.

The primary reason I came to UConn is how well-supported it has been by this body over many years. We are so very lucky that our governors and legislators realize the importance of their flagship university in educating our future leaders, and being a key lever in economic development. Few *legislatures in the nation* understand this right now, and ours is one, thanks to you.

Nothing speaks as loudly about the success of a university than student demand. Students and parents know value, and they seek the kind of excellence we have, at such a competitive price. President Obama raised this in his State of the Nation speech this week – that we need to focus on value. You should be proud of both UConn and the CT State colleges in this regard. Our students leave UConn with an average debt under the national average because we are so good at supporting our students in need.

Demand to attend UConn is astounding and keeps growing. In 2012, we had approximately 31,400 applications for our freshman class of 4,400 (at all our campuses).

Of course the current fiscal year and the proposed FY14 state appropriation will challenge the University to make difficult decisions, and to do even more with less. But we fully understand the enormity of Connecticut's fiscal constraints. The cuts to our block grant have been very tough, as you know, and this has affected what we can do for our students. But in any case, we share the sacrifice, and look to the

future. It may be a terrible few years, but if we can see a brighter future, we will hang in there and do our best of course.

As you can imagine, the University of Connecticut is very grateful to Governor Malloy for including the extraordinary *Next Generation Connecticut* proposal in his budget. While there is a major 10-year capital component of this initiative that stretches out the UCONN 2000 program until 2024, there is also an operating budget component, reflected in the University's FY15 state appropriation.

Let me make some general remarks about this initiative and then ask Mun Choi, our Provost, to explain it in more detail. After that, I'm happy to answer questions about this, but also any others you may have on any aspect of the university.

You may be wondering, with such a large state deficit, is this the appropriate time for the type of initiative represented by Next Generation CT?

I believe that the answer is an emphatic "YES." Just as the Research Triangle in North Carolina has allowed that region to thrive despite economic downturns, this initiative will create a more prosperous, economically dynamic Connecticut.

It will create and support the very jobs we need to be an economically vibrant and successful state in the future. In this era, more than ever, states must rely on their public research universities to be the backbone and the driver of economic success. And that is exactly what this proposal would accomplish. It is the perfect complement to Bioscience Connecticut, Jackson Labs, and the Storrs Technology Park.

*Next Generation Connecticut* will expand critical STEM activities at UConn and drive innovation, enhancing job creation and economic growth. With targeted strategic investments in facilities, faculty and students, UConn will be an increasingly vital STEM institution, fueling Connecticut's economy with new technologies, highly skilled graduates, new companies, patents, licenses, and high-wage STEM jobs. *Next Generation Connecticut* will allow UConn to:

- Enroll an additional 6,500 talented undergraduate students
- Build STEM facilities to house expanded materials science, physics, biology, engineering, cognitive science, and genomics programs, to name a few.
- Construct new STEM teaching laboratories and renovate current STEM facilities.

- Hire 259 new faculty above and beyond the faculty we are hiring under our current plan
- Upgrade infrastructure to accommodate these new faculty and students
- Facilitate moving the Greater Hartford Campus to downtown Hartford
- Increase digital media and risk management degree programs and provide student housing in Stamford

*Next Generation Connecticut* will create both construction jobs and sustainable long-term employment. Additionally, by 2024, *Next Generation Connecticut* will deliver:

- \$146M per year in new research expenditures
- \$285M per year in new business activity in Connecticut, or a 118% increase resulting from research at UConn
- 4,050 permanent jobs
- 30,000 total construction jobs through 2024

Other states have made similar investments in STEM research, creating jobs and increasing their economies. In each state, positive outcomes have accrued; jobs have been created, with strong returns on their investments.

Thankfully, we don't have to guess about return on investment. We have empirical data from other states demonstrating exactly how investments in research boost regional and state economies. This is covered in many journal articles, reports, and newspapers from around the nation, and we can get those to you if you'd like.

It is now Connecticut's time to act. *Next Generation Connecticut* will enable our state to compete effectively in the global marketplace, revive innovation and create jobs. And this initiative will finally enable us to reach the top. I believe that Connecticut is a great enough state to have a top research university that leads

scientific discovery. Why should Michigan or North Carolina have one and not us? We are as talented and as important, here in Connecticut.

I believe it is my duty to help get us there, to the top, and to always be honest with you about what it will take. I assure you that, if we pursue *Next Generation Connecticut*, we will have our University of Michigan for this state – an international university of the highest order. Connecticut deserves it and we can actually make this happen.

To riff off the great Rabbi Hillel: If not us, who? And, if not now, when? We must get started or we'll never get there.

One of the wonderful things about spending your life with young people, primarily 18-22, as I have, is that they are so positive all the time. They are effervescent; they have that life force that makes a university campus a positive place, no matter the trauma of the larger economy, the wars that have wounded so many, and the other horrors of 21<sup>st</sup> century adult life we know so well. Students shout out to me all the time, "Hey, President Herbst: YOLO! You only live once."

They are correct of course, and I hope that we can work together to achieve the kind of greatness we can actually reach *in our own lifetimes*, with the right strategic investments.

Again, my thanks for your incredible support of the University of Connecticut.



University of Connecticut

## NEXT GENERATION CONNECTICUT

Building Connecticut's Economic  
Future through STEM

February 2013

### IMPACT OF STATE INVESTMENT



UConn

	FY96 (Fall 1995)	FY13 (Fall 2012)
Undergraduate Students	14,667	22,301
Grad/Professional Students	7,804	7,427
Tenure/Tenure-Track Faculty	1,012	1,061
UConn SAT (National Avg)	1113 (1013)	1226 (1010)
Bachelor's Degrees	2,941	5,149 (FY12)
6 Year Graduation Rate	70%	82%
Grad/Professional Degrees	1,757	2,462 (FY12)
Budget	\$450.9M	\$1,054.9M
Research Awards (w/UCHC)	\$56M (\$98M)	\$124M (\$200M)
Scholarships/Grants	\$28M	\$142M

From FY96-FY12:

- UConn research awards totaled \$1.5B (\$2.9B w/UCHC)
- Business activity resulting from research totaled \$3.0B (\$5.6B w/UCHC)

2

## STEM: A SMART INVESTMENT FOR CT



- STEM jobs grew 3 times faster than non-STEM jobs (2000-2010)
- 2/3 of GDP growth is driven by STEM innovations
- Increasing STEM enrollments increases R&D, patents and Small Business Innovation Research awards
- Nearly 20% of STEM workforce is 55+ years old
- Increased STEM activities will leverage CT's current STEM initiatives: Bioscience CT, JAX Genomics Medicine & Tech Park
- The 2012 Kauffman Foundation State New Economy ranks CT:
  - #25 in Entrepreneurial Activity
  - #39 in Non-Industry R&D Investments
  - #50 in Job Churn (measure of entrepreneurship & innovation)

Sources: Bureau of Labor Statistics, National Academy of Engineering, National Science Foundation

## STEM: A SMART INVESTMENT FOR UCONN



### Education:

- More than 240% increase in STEM applications since 2001
- More than 120% increase in STEM degrees awarded since 2001
- UConn's current faculty hiring plan will add 175 STEM faculty

### Research:

- In 2012, \$900M in STEM research proposals (\$460M @ Storrs)
- In 2012, \$170M in STEM research awards (\$98M @ Storrs)

### Workforce & Economic Development:

- 70% of UConn graduates work in CT to support the economy
- 270 patents
- Over 100 intellectual property applications per year
- Technology incubators to support faculty, student and entrepreneur innovations

## STEM INVESTMENTS TO BE COMPETITIVE



- STEM education involves learning through laboratory experience, capstone design, research and industry projects
- Recently constructed STEM facilities are at full capacity:  
Chemistry, Info Technology & Engineering, Pharmacy/Biology, Marine Science & Ag-Biotech
- Pre-1960's era STEM facilities are outdated and at full capacity:  
Gant, Torrey, Beach, Koons, Atwater, Engineering II, Bio-Science Laboratory, Bronwell, United Technologies Engineering, Longley
- Faculty cannot compete for major research grants or effectively teach students using outdated STEM facilities

5

## STEM RESEARCH OPPORTUNITIES



### Advanced Manufacturing

- Additive Manufacturing, Materials Genomics, Systems Engineering, Cyber-Physical Integration

### Energy, Environment & Resources

- Renewable Energy, Fuel Cells, Energy Storage, Microstorage, Pollution Control, Water Resource Management

### Systems Genomics, Biology & Biotechnology

- Human, Animal & Environmental Genomics, Personalized Medicine, Synthetic & Computational Biology, Drug Discovery

### Big Data, Deep Analytics & Digital Media

- High Performance Computing, Scientific Visualization, Business Informatics, Cyber-Physical Systems, Data Fusion

### Cognitive & Neuroscience

- Human-Computer Interaction, Neuropsychology, Communications Technology, Message Systems Analysis, Language Acquisition, Speech & Hearing, Autism

6

## NEXT GENERATION CT OVERVIEW



### Education & Workforce Development:

- Increase undergraduate (UG) enrollment by 6,580 (30%)
  - Increase STEM UG students by 3,290 (42%)
  - Increase Engineering UG students by 1,410 (70%)
  - Increase Biological, Physical and Chemical Science UG students by 1,800 (33%)
  - Increase Digital Media UG students by 840
  - Increase Risk Management & Global Business UG students by 680
- Award 50 STEM fellowships per year to train outstanding doctoral students

### Education, Research & Economic Development:

- Hire 259 faculty (in addition to 290 from current plan)
  - Hire 200 STEM faculty (in addition to 175 STEM faculty from current plan)
- Develop critical STEM facilities for faculty research and innovative teaching

### Education & Urban Renewal:

- Increase Stamford Campus programs by expanding Digital Media & Business
- Relocate Greater Hartford Campus to downtown Hartford

## NEXT GENERATION CT COMPONENTS



### Capital Plan: \$1.77B (State Request: \$1.54B and UConn: \$235M)

- \$538M for construction & renovations of new STEM facilities
- \$682M for infrastructure improvements
  - \$565M for teaching and research labs to accommodate faculty & students
  - \$100M for steam line repair
  - \$17M for new water source (add'l \$8M from Tech Park funding)
- \$310M for research equipment, IT & teaching labs
- \$72M to convert existing housing to a STEM Living & Learning Community and construct two new dormitories (net of additional revenue earned)
- \$93M for 5,480 more surface and structured parking spaces
- \$70M for Greater Hartford Campus relocation
- \$10M for Stamford Campus student housing

## NEXT GENERATION CT COMPONENTS



### Establish premier Connecticut STEM Honors Program

- Eligibility criteria: minimum 1350 SAT & top 10% of high school class
- 1,400 full tuition scholarships by FY20 for Connecticut's best students
- "Big Idea" grants for undergraduate research projects with top faculty
- STEM industry internship/co-op experiences
- New STEM Honors living & learning community with STEM faculty and industry partners serving as mentors

9

## NEXT GENERATION CT COMPONENTS



### Stamford Component of New School of Fine Arts and Digital Design & Media

- Undergraduate and graduate degrees in animation, visual effects & production, interactive design, game development, motion media design, sports entertainment, data visualization and 'Big Data Analytics'

### Stamford Business Programs

- Undergraduate degrees & Graduate Certificates\* in financial management, int'l business, advanced risk management, crisis management, sports management, global business, business/engineering (dual graduate degree)

Proposed Growth	
Undergrad Enrollment	1,520/110%
Undergrad Degrees	304/119%
Faculty	35
State Operating Request	\$2.3M
UConn Commitment*	\$3.6M

### \$10M Capital Request for Housing and Campus Enhancements

\* The expansion of the graduate degree and advanced certificate programs will all be funded by UConn

10

## NEXT GENERATION CT COMPONENTS



### Downtown Hartford Campus Relocation

- Greater Hartford Campus serves the most diverse student group at UConn
- Enhanced accessibility and service to low income/high-potential students
- Enhanced service learning and internship opportunities for undergraduate and graduate professional education programs
- Expanded economic activity through increased interaction with local businesses
- Direct contributions to state workforce development from professional graduate programs in Business, Engineering, Public Administration, and Social Work
- Geographic proximity will increase transfer access for community college students

11

## RETURN ON INVESTMENT



- Median income of CT residents with STEM degrees earn \$11K more per year than graduates with other degrees
- Every \$1M in NIH research funding supports 15 jobs (average salary of \$60K)
- Each new science/technology job creates more than one additional job
  - Each job in chemical manufacturing creates 3.1 additional jobs
  - Each job in computers & electronics creates 1.3 additional jobs
- For every new research \$1, CT will gain \$1.95 in business activity
- Every \$2M in research expenditures will yield a patent
- Investments will increase research productivity to \$300K for STEM faculty
- By 2024 this will yield Connecticut:
  - \$146M in new research awards and \$285M in new business activity per year
  - 135 patents and disclosures per year
  - 2,190 new & 4,050 total permanent jobs
  - 30,000 total construction jobs

Sources: State Higher Education Executive Officers, National Institutes of Health, Connecticut Economic Resource Center

12

# FUNDING PROPOSAL



Operating (\$M)*	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24
State Request	\$17.4	\$33.8	\$54.0	\$70.3	\$80.6	\$92.7	\$102.4	\$113.0	\$123.8	\$137.0
UConn Commitment	\$18.5	\$13.1	\$20.2	\$28.9	\$35.4	\$41.3	\$48.2	\$54.8	\$62.4	\$69.8
* Amounts shown are cumulative & in addition to support of current faculty hiring plan of \$79M										
Capital Request (\$M)*	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24
Academic & Research Facilities	\$15.0	\$35.0	\$75.0	\$100.0	\$100.0	\$125.0				
Deferred Maintenance				44.0	104.0	101.0	141.0	71.0	92.0	52.0
Equipment	35.0	10.0	30.5	34.5	35.0	43.0	20.5	20.0	20.0	21.5
Hartford Relocation	30.0	40.0								
Residential Life Facilities	20.0	20.0			12.0			20.0		
Parking Garage # 3							30.0	33.0		
Stamford Campus Housing	5.0	5.0								
Total Request	\$105.0	\$110.0	\$105.5	\$178.5	\$251.0	\$269.0	\$191.5	\$144.0	\$112.0	\$73.5
* Amounts shown are annual increments and are in addition to the reallocation of existing UCONN 2000 funds										

13

## FY 2015 OPERATING PROPOSAL: \$35.9M



- \$17.4M State request; \$18.5M UConn commitment
- Increase undergraduate enrollment by 785 (285 @ Stamford)
- Hire 38 faculty (20 STEM faculty)
- Establish premier Connecticut STEM Honors Program
  - 325 full tuition scholarships for Connecticut's best students
  - 325 "Big Idea" grants for undergraduate research projects with top faculty
  - STEM industry internship/co-op experiences
- Award 15 STEM fellowships to train outstanding doctoral students
- Increase Stamford Campus programs by expanding Digital Media & Business

14

## ENROLLMENT & FACULTY INCREASES



Enrollment*	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24
Storrs STEM	325	627	1,075	1,503	1,808	2,098	2,404	2,692	2,998	3,290
Storrs non-STEM	175	338	580	810	975	1,130	1,294	1,451	1,615	1,770
Stamford	285	575	955	1,310	1,430	1,520	1,520	1,520	1,520	1,520
<b>Total Enrollment</b>	<b>785</b>	<b>1,540</b>	<b>2,610</b>	<b>3,623</b>	<b>4,213</b>	<b>4,748</b>	<b>5,218</b>	<b>5,663</b>	<b>6,133</b>	<b>6,580</b>
Faculty*	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24
Storrs STEM	12	24	46	66	86	116	136	156	176	200
Storrs non-STEM	8	16	24	24	24	24	24	24	24	24
Stamford	18	26	35	35	35	35	35	35	35	35
<b>Total Faculty</b>	<b>38</b>	<b>66</b>	<b>105</b>	<b>125</b>	<b>145</b>	<b>175</b>	<b>195</b>	<b>215</b>	<b>235</b>	<b>259</b>

\* Amounts shown are cumulative

15

## EXAMPLES FROM OTHER STATES



- Over 20 years, Georgia's \$400M investment in research yielded \$2B in federal and private funds and created 5000 new technology jobs and 120 new technology companies
- In the University of California system, every dollar of state-funded research in 2000-2001 led to an additional \$3.89 in federal and private funding
- At UConn: Four new faculty in Pharmacy increased research expenditures in the department from \$2.9M in FY08 to \$5.3M in FY12 (up to \$600K per faculty member per year)

16

# RETURN ON INVESTMENT



	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24
Research Awards (M) (New)	\$167 (\$43)	\$189 (\$65)	\$201 (\$77)	\$210 (\$86)	\$220 (\$96)	\$232 (\$108)	\$241 (\$117)	\$250 (\$126)	\$260 (\$136)	\$270 (\$146)
Business Activity (M) (New)	\$325 (\$84)	\$368 (\$127)	\$392 (\$151)	\$410 (\$169)	\$428 (\$187)	\$452 (\$210)	\$470 (\$228)	\$488 (\$246)	\$506 (\$264)	\$527 (\$285)
Jobs (New)	2,503 (643)	2,835 (975)	3,018 (1,158)	3,156 (1,296)	3,295 (1,435)	3,478 (1,618)	3,617 (1,757)	3,755 (1,895)	3,894 (2,034)	4,050 (2,190)
Construction Jobs	2,100	2,200	2,110	3,570	5,020	5,380	3,830	2,880	2,240	1,470

Sources: National Institutes of Health, American Society for Engineering Education



## ***Next Generation Connecticut***

### **Building Connecticut's Economic Future through STEM**

#### **Background & Overview**

Connecticut has historically been known as the birthplace of invention and innovation. Connecticut inventors created the cotton gin, anesthesia, the first submarine, helicopter, color television, the portable typewriter and a range of industrial technologies. The technical proficiency that contributed to Connecticut's economy has declined dramatically. According to the Kaufmann Foundation New Economy 2010 Report, Connecticut ranked #14 in high-tech jobs, #15 in patents, #22 in entrepreneurial activity and #37 in non-industry R&D investments. Connecticut's long-term economic competitiveness can be re-invigorated with key investments for pioneering R&D and vital educational programs in the STEM (science, technology, engineering, and math) disciplines. This proposal, *Next Generation Connecticut*, will expand critical STEM activities at UConn and drive innovation, enhancing job creation and economic growth. With these key, targeted strategic investments in facilities, faculty and students, UConn will be an increasingly vital STEM institution, fueling Connecticut's economy with new technologies, highly skilled graduates, new companies, patents, licenses, and high-wage STEM jobs.

#### **Next Generation Connecticut**

As part of this ambitious, ten-year plan, the University proposes to hire innovative faculty, build new facilities and enroll talented students, as follows:

- Hire 259 new faculty (of which 200 will be in STEM)
- Enroll an additional 6,580 talented undergraduate students
- Build STEM facilities to house materials science, physics, biology, engineering, cognitive science, genomics and related disciplines
- Construct new STEM teaching laboratories
- Create a premier STEM Honors program
- Upgrade aging infrastructure to accommodate new faculty and students
- Expand digital media and risk management degree programs and provide student housing in Stamford
- Relocate Greater Hartford Campus to downtown Hartford

#### **Proposed Funding**

Proposed capital and operating funding for *Next Generation Connecticut* will be allocated incrementally between FY15 and FY24.

<b>Operating (\$M)*</b>	<b>FY15</b>	<b>FY16</b>	<b>FY17</b>	<b>FY18</b>	<b>FY19</b>	<b>FY20</b>	<b>FY21</b>	<b>FY22</b>	<b>FY23</b>	<b>FY24</b>
State Request	\$17.4	\$33.8	\$54.0	\$70.3	\$80.6	\$92.7	\$102.4	\$113.0	\$123.8	\$137.0
UConn Commitment	\$18.5	\$13.1	\$20.2	\$28.9	\$35.4	\$41.3	\$48.2	\$54.8	\$62.4	\$69.8

\*Amounts shown are cumulative & in addition to support of current faculty hiring plan of \$79M.

<b>Capital Request (\$M)*</b>	<b>FY15</b>	<b>FY16</b>	<b>FY17</b>	<b>FY18</b>	<b>FY19</b>	<b>FY20</b>	<b>FY21</b>	<b>FY22</b>	<b>FY23</b>	<b>FY24</b>
Academic & Research Facilities	\$15.0	\$35.0	\$75.0	\$100.0	\$100.0	\$125.0				
Deferred Maintenance				44.0	104.0	101.0	141.0	71.0	92.0	52.0
Equipment	35.0	10.0	30.5	34.5	35.0	43.0	20.5	20.0	20.0	21.5
Hartford Relocation	30.0	40.0								
Residential Life Facilities	20.0	20.0			12.0			20.0		
Parking Garage # 3							30.0	33.0		
Stamford Campus Housing	5.0	5.0								
<b>Total Request</b>	<b>\$105.0</b>	<b>\$110.0</b>	<b>\$105.5</b>	<b>\$178.5</b>	<b>\$251.0</b>	<b>\$269.0</b>	<b>\$191.5</b>	<b>\$144.0</b>	<b>\$112.0</b>	<b>\$73.5</b>

\* Amounts shown are annual increments and are in addition to the reallocation of existing UCONN 2000 funds.

UConn will commit significant institutional resources to launch *Next Generation Connecticut* by contributing \$235M in reallocated UCONN 2000/21<sup>st</sup> Century UConn funds for the building program and \$149M in operating funds to support the academic program components.

### **Emphasis on STEM**

According to a recent study by *Georgetown University's Center on Education & Workforce*, eight million U.S. jobs will be available in STEM fields. Nationally, overall employment is projected to grow 9.6% from 2010 to 2020. Connecticut labor analysis projects a similar trend. For example, the Connecticut Department of Labor, projects the need for 54% more biomedical engineers. But report after report shows that the next generation of American employees will be unprepared for these jobs. Of 34 industrialized countries, American students rank 17<sup>th</sup> in science and 25<sup>th</sup> in math scores. This gap between demand and supply limits our nation's ability to solve the complex problems of our time, inhibits the innovation required to remain competitive, and results in severe long-term economic consequences for our country. However, this situation also provides Connecticut with a unique opportunity.

*Next Generation Connecticut* will have a tremendous impact on the reversal of these trends and grow Connecticut's STEM workforce to enable our state to compete effectively in the global marketplace. According to the National Academy of Engineering, two-thirds of the growth in our GDP has its roots in STEM. The U.S. Bureau of Labor Statistics reports that:

- STEM jobs grew 3 times faster than non-STEM jobs in the last decade
- STEM jobs are projected to continue to grow by 17% ('08-'18), as compared to 10% in non-STEM
- It is anticipated that approximately 20% of the STEM workforce is over the age of 55+ and may retire over the next 10 years.

For these reasons, increasing our STEM enrollment, hiring additional STEM faculty, doubling our research funding, and constructing and renovating STEM facilities comprise the components of this bold proposal.

## **Return on Investment (ROI)**

*Next Generation Connecticut* will create both construction jobs and sustainable long-term employment. This proposal will also leverage and maximize the state's related investments in Bioscience CT, JAX, UCONN 2000/21<sup>st</sup> Century UConn and the UConn Tech Park.

- By 2024, *Next Generation Connecticut* will yield:
  - \$146M per year in new research awards (118% increase)
  - \$285M per year in new business activity in CT (118% increase) resulting from research at UConn
  - 2,190 new or 4,050 total permanent jobs
  - 30,000 total construction jobs through 2024

ROI	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24
New Research Awards	\$43	\$65	\$77	\$86	\$96	\$108	\$117	\$126	\$136	\$146M
New Business Activity	\$84	\$127	\$151	\$169	\$187	\$210	\$228	\$246	\$264	\$285M
New Jobs	643	975	1,158	1,296	1,435	1,618	1,757	1,895	2,034	2,190

Other states (Appendix A) have made similar investments in STEM research, creating jobs and increasing their economies. In each state, positive outcomes have accrued; jobs have been created, with strong ROI. It is now our time and the University is prepared to join the ranks of the top STEM institutions and states in the country.

## **Return on Previous Investments**

Why does the University need an additional infusion for *Next Generation Connecticut*? Due to chronic historic under funding, UConn focused UCONN 2000 and 21<sup>st</sup> Century UConn on numerous teaching facilities, general utilities, information technology, residence halls, and infrastructure. Additionally, the University constructed science facilities, including the new Chemistry, Information Technology, Pharmacy/Biology, Marine Sciences and Agriculture Biotechnology buildings. Additionally, the University renovated a number of current facilities for Life Sciences, Biobehavioral Science, Education, and Nursing. The University has major projects underway, including our new Engineering and Psychology buildings, and the renovation of our Agricultural research facilities. While these university-wide investments have allowed us to increase STEM enrollment by 115 percent, UConn must do more to produce many more STEM graduates to meet workforce shortages and drive discoveries that will fuel Connecticut's long-term economic growth.

The UCONN 2000 and 21<sup>st</sup> Century UConn investments are the major contributors to UConn's growing reputation for academic excellence and its emergence as a leader in higher education in the Northeast, drawing top students from Connecticut and the rest of the nation. UConn's rise during the past 16 years has been astounding, the result of strategic state support that was wisely invested in both facilities and infrastructure. Beginning in 1996, UConn's

- Research awards increased by 119%
- Undergraduate enrollment increased by 52%
- Undergraduate STEM enrollment increased by 115%
- Average freshman SAT scores increased by 113 points to 1226

- Undergraduate degrees awarded per year increased by 75%
- Graduate/professional degrees awarded per year increased by 40%

Record numbers of applications from high-caliber students and support for student success resulted in UConn's increase in national rankings from #38 to #21 among public universities, according to *U.S. News and World Report*. UConn currently enrolls 13% of Connecticut's high school seniors and our fall 2012 class, once again, included the largest, most diverse, and most academically talented students ever admitted.

This further investment in STEM will result in dramatic increases in both STEM research and STEM graduates, in turn producing innovations and inventions that will directly contribute to sustainable economic growth for Connecticut.



University of Connecticut

## UNIVERSITY UPDATE FEBRUARY 2013

### UConn: A Connecticut Success Story

- ▶ The State's unprecedented investment in physical capital has catapulted UConn from a 3rd or 4th choice school to a 1st choice for highly prepared in-state, out-of-state and international students
- ▶ UConn ranked 21st among public universities nationally according to *U.S. News and World Report*
- ▶ UConn ranked in the top 30 best value public colleges for in-state costs by *Kiplingers Personal Finance*



## Exciting Period of Growth

- ▶ 290 new faculty hiring program
- ▶ UCONN 2000 construction & renovations
- ▶ Bioscience CT & JAX Lab partnership for personalized medicine
- ▶ Tech Park for innovation and industry collaboration
- ▶ Future: *Next Generation Connecticut*



3

## Contributing to the Economic Health of Connecticut

- ▶ Growth in research funding=innovative technologies (patents, technology startups & licenses)
- ▶ Technology Incubation Program: job creation & revenue generation in many industries
- ▶ Eminent Faculty Programs: Center for Clean Energy Engineering and Advanced Manufacturing & Materials Genomics
- ▶ Stem Cell Institute
- ▶ Center for Entrepreneurship & Innovation



4

<b>UConn Statistics</b>	<b>Fall 2005</b>	<b>Fall 2009</b>	<b>Fall 2012</b>	<b>% Change</b>
Undergrad Students	20,525	21,496	22,301	9%
Bachelor's Degrees	3,816	4,610	5,149	35%
Doctoral Degrees	261	266	341	31%
Undergrad Applications	19,763	23,289	31,363	59%
Grad Applications	6,628	8,229	9,352	41%
SAT Scores	1189	1212	1226	3%
Freshmen in top 10%	37%	44%	48%	11%
6 Year Grad Rate	72%	78%	82%	10%
Tenured/TT Faculty (Total Faculty)	1,004 (1,251)	989 (1,286)	1,061 (1,377)	6% (10%)
	<b>FY06</b>	<b>FY10</b>	<b>FY13 Estimates</b>	<b>% Change</b>
Scholarships & Grants	\$71.8M	\$116.1M	\$141.8M	97%
Research Awards	\$181.8M	\$233.2M	\$200.0M	10%
Research Proposals	\$355M	\$660M	\$552M	55%

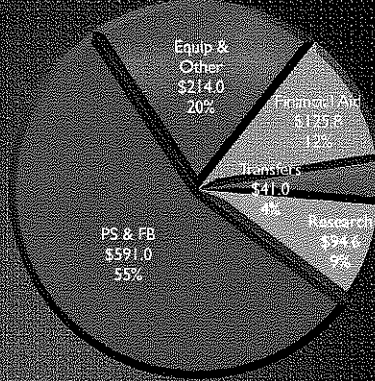
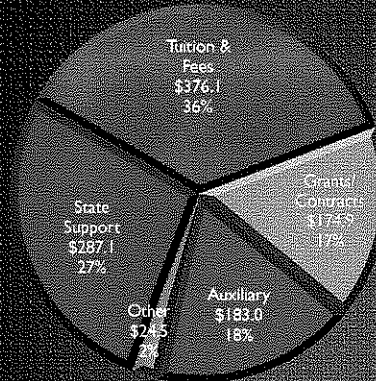
## FY13 Budget Plan vs Forecast

- ▶ Tuition increases to support faculty hiring plan
- ▶ State appropriation
  - ▶ 2% less prior to funds for Eminent Faculty, CT Center for Advanced Technology, CommPACT, Kerr Grant
  - ▶ 5% rescission in December
- ▶ Increased financial aid
- ▶ No wage increases per SEBAC agreement
- ▶ Higher fringe benefit rates than budgeted
- ▶ Funding for initiatives & investments
- ▶ Continuation of university-wide savings efforts

## FY13 Budget Context (\$M)

Revenue Forecast: \$1,045.6

Expense Forecast: \$1,066.4



7

## Increase in Student Demand for Admission

Fall 2012 compared to fall 1995:

- ▶ Freshman Applications at all campuses increased 190% (10,809 to 31,363)
- ▶ SAT scores increased 113 points at Storrs (1113 to 1226)
- ▶ 1,529 valedictorians and salutatorians enrolled at all campuses since 1995
- ▶ Freshman enrollment at Storrs increased 54% (2,021 to 3,114)
- ▶ Minority freshman enrollment at Storrs increased 169% (308 or 15% to 827 or 27%)
- ▶ Undergraduate enrollment at all campuses increased 52% (14,667 to 22,301)
- ▶ Students housed at Storrs increased 78% (6,957 to 12,358)



8

## Faculty Hiring Plan

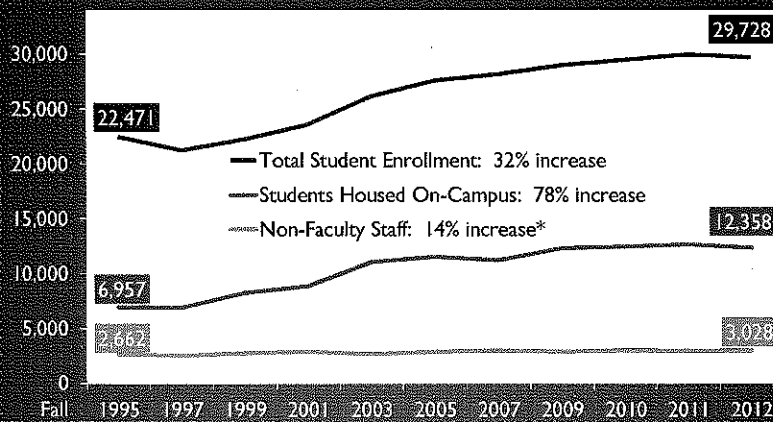
### ► Goals of tuition and fee/faculty hiring plan

- Decrease the student to faculty ratio by hiring 290 new faculty over 4 years
  - Fall 2012 – 47 faculty hires net
- Expand course offerings to help students to graduate on time
- Allow students and parents to budget ahead of time

Student to Faculty Ratio	
FY96	14.2
FY98	14.9
FY00	15.2
FY02	16.6
FY04	18.2
FY06	17.2
FY08	17.0
FY10	17.9
FY11	18.1
FY12	18.3
FY13	17.3



## Staff & Student Growth



\*Senior administrators represent 2.5% of total employees



## In-State Undergraduate Tuition & Fees

UConn	Tuition & Fees	
FY08	\$8,852	5.9%
FY09	\$9,338	5.5%
FY10	\$9,886	5.9%
FY11	\$10,416	5.4%
FY12	\$10,670	2.4%
FY13	\$11,362	6.5%



11

## In-State Tuition & Mandatory Fees for Top 30 Public Universities

Public Schools	US News Public Rank	FY13 Tuition & Fees	FY12-13 Change	FY09-13 Change
Pittsburgh	19	\$16,590	2.8%	21.6%
Penn State	13	16,444	2.9%	20.0%
Illinois	13	14,960	8.1%	27.7%
UC Irvine	12	14,046	7.0%	74.6%
UC Davis	8	13,877	0.1%	60.6%
UC Santa Barbara	10	13,660	0.5%	62.9%
William & Mary	6	13,570	3.3%	32.4%
Minnesota	25	13,524	3.9%	25.7%
UC San Diego	8	13,379	1.4%	65.7%
Rutgers	25	13,073	2.5%	13.3%
Michigan	4	12,994	2.8%	17.7%
UC Berkeley	1	12,876	0.3%	68.2%
UCLA	2	12,692	0.0%	68.0%
Michigan State	28	12,674	3.9%	24.1%
Clemson	25	12,674	3.0%	22.9%
Virginia	2	12,224	3.7%	28.8%
Washington	13	12,155	15.0%	78.7%
UConn	21	11,362	6.5%	21.7%
Virginia Tech	28	10,923	3.9%	33.2%
Wisconsin	10	10,380	7.4%	37.2%
Georgia Tech	7	10,098	4.6%	67.2%
Ohio State	18	10,037	3.1%	15.6%
Texas	13	9,938	1.5%	16.8%
Purdue	23	9,900	4.5%	27.7%
Georgia	21	9,842	3.9%	63.2%
Maryland	19	8,909	2.9%	11.3%
Texas A&M	23	8,505	1.0%	8.4%
Iowa	28	8,061	3.8%	23.2%
UNC Chapel Hill	5	7,694	9.8%	42.6%



12

## Out-of-State Tuition & Mandatory Fees for Top 30 Public Universities



Public Schools	US News Public Rank	FY13 Tuition & Fees	FY12-13 Change	FY09-13 Change
Michigan	4	\$39,122	3.5%	18.3%
Virginia	2	38,236	4.0%	28.4%
William & Mary	6	37,344	3.8%	27.3%
UC Irvine	12	36,924	2.6%	28.9%
UC Davis	8	36,755	0.0%	25.7%
UC Santa Barbara	10	36,538	0.2%	26.0%
UC San Diego	8	36,257	0.5%	26.4%
UC Berkeley	1	35,754	0.1%	26.5%
UCLA	2	35,570	0.0%	26.3%
Texas	13	33,780	3.9%	20.4%
Michigan State	28	32,632	4.8%	27.1%
Washington	13	29,710	5.9%	28.0%
Clemson	25	29,600	4.0%	26.9%
Georgia Tech	7	29,402	5.5%	16.8%
UConn	21	29,194	5.8%	21.4%
Illinois	13	29,102	4.0%	14.1%
Penn State	13	28,746	2.4%	15.3%
Purdue	23	28,702	3.8%	23.6%
Florida	17	28,448	1.8%	37.9%
UNC Chapel Hill	5	28,446	6.0%	27.6%
Georgia	21	28,052	1.3%	25.6%
Maryland	19	27,288	4.8%	18.3%
Iowa	28	26,931	7.3%	30.4%
Wisconsin	10	26,630	4.8%	22.1%
Rutgers	25	26,393	3.8%	22.8%
Pittsburgh	19	26,280	2.9%	12.8%
Virginia Tech	28	25,915	5.9%	24.4%
Ohio State	18	25,445	3.3%	16.1%
Texas A&M	23	25,035	5.1%	12.9%

13

## FY 2014 Undergraduate Increases

Undergraduate	In-State		Out-of-State	
	FY13 Approved	FY14 Proposed	FY13 Approved	FY14 Proposed
Tuition	\$8,712 5.52%	\$9,256 6.24%	\$26,544 5.53%	\$28,204 6.25%
Other Fees*	2,650	2,766	2,650	2,766
Room - Double	6,096	6,278	6,096	6,278
Board - Value Plan	5,044	5,196	5,044	5,196
Total	\$22,502	\$23,496	\$40,334	\$42,444
Increment	\$1,016	\$994	\$1,952	\$2,110
Percentage	4.7%	4.4%	5.1%	5.2%

\*To be presented to the Board of Trustees on 2/27/13



14

## FY 2014 Graduate Increases

Graduate	In-State		Out-of-State	
	FY13 Approved	FY14 Proposed	FY13 Approved	FY14 Proposed
Tuition	\$10,782 5.46%	\$11,456 6.25%	\$27,990 5.50%	\$29,740 6.25%
Other Fees*	2,084	2,206	2,084	2,206
Room - Double	7,250	7,540	7,250	7,540
Board - Value Plan	<u>5,044</u>	<u>5,196</u>	<u>5,044</u>	<u>5,196</u>
Total	\$25,160	\$26,398	\$42,368	\$44,682
Increment	\$1,160	\$1,238	\$2,060	\$2,314
Percentage	4.8%	4.9%	5.1%	5.5%

\*To be presented to the Board of Trustees on 2/27/13



## Assisting Students with Financial Need

- ▶ Our best financial aid packages are provided to in-state, low income students
  - ▶ Tuition funded need-based grants increased 33% since FY10
  - ▶ Tuition funded need-based grants as a percentage of net tuition revenue is forecasted to be 18.4% for FY13
- ▶ During FY12, more than 21,000 students received financial aid from all known sources (more than 17,500 were packaged by Financial Aid Office)
- ▶ For FY13:
  - ▶ Additional one-time aid of \$4.1M (\$5.8M in FY12) is attributable to the change in continuing student demand
  - ▶ \$1.2M to replace State reduction in CAPCS funding for FY13 only
  - ▶ \$500k in new Law School scholarships



## Financial Aid (\$M)

Tuition Funded	FY10 Actual	FY11 Actual	FY12 Actual	FY13 Forecast	FY10-FY13 % Change
Need-Based Grants	\$36.3	\$40.8	\$46.2	\$48.1	33%
Work Study/Student Labor	5.9	6.1	5.8	6.3	7%
Scholarships	18.4	20.7	23.0	26.2	42%
Tuition Waivers	45.2	46.9	48.8	53.5	18%
Total Tuition Funded	\$105.8	\$114.5	\$123.8	\$134.9	28%
Total Tuition Funded as a % of Gross Tuition Revenue	38.9%	39.1%	40.1%	39.4%	
<b>Tuition Funded Need- Based Aid as a % of Net Tuition Revenue</b>	<b>17.6%</b>	<b>18.1%</b>	<b>19.2%</b>	<b>18.4%</b>	

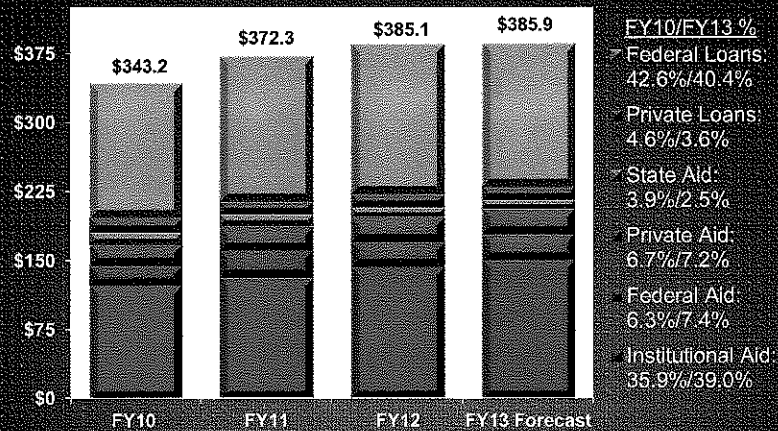


## State Need-Based Financial Aid (\$M)

	FY08	FY09	FY10	FY11	FY12	FY13 Est
CT Aid to Public College Students	\$9.4	\$9.3	\$8.6	\$8.4	\$8.3	\$6.7
Capitol Scholarships	\$4.5	\$4.4	\$4.2	\$4.2	\$1.9	\$2.3



## Total Financial Aid (\$M)



## FY 2014 Goals

- ▶ Continue to consolidate and streamline current services
- ▶ Develop infrastructure and support needed to implement the Faculty Hiring Plan
- ▶ Further enhance academic quality
- ▶ Invest in innovation, technology development and new jobs
- ▶ Train highly skilled professionals to meet the needs of Connecticut businesses
- ▶ Begin implementation & recruitment for *Next Generation Connecticut*



# APPENDIX

21

## Student Facts & Figures

Fall 2012 compared to fall 1995:

- ▶ Freshman Applications at all campuses increased 190% (10,809 to 31,363)
- ▶ SAT scores increased 113 points at Storrs (1113 to 1226)
- ▶ 1,529 valedictorians and salutatorians enrolled at all campuses since 1995
- ▶ Freshman enrollment at Storrs increased 54% (2,021 to 3,114)
- ▶ Minority freshman enrollment at Storrs increased 169% (308 or 15% to 827 or 27%)
- ▶ Undergraduate enrollment at all campuses increased 52% (14,667 to 22,301)
- ▶ Students housed at Storrs increased 78% (6,957 to 12,358)



22

## Student Facts & Figures

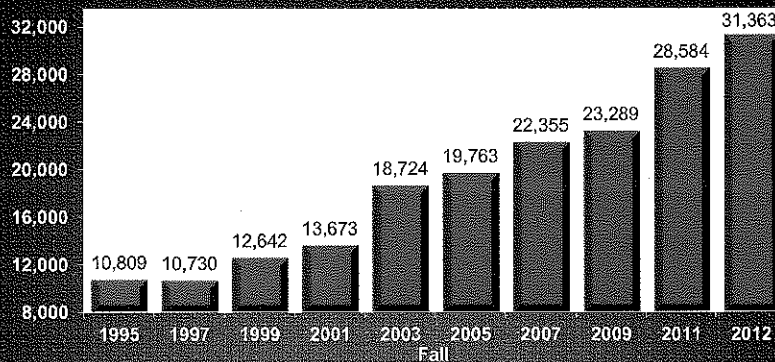
- ▶ Fall 2011 freshman retention is 93% and minority freshman retention is 91%
- ▶ Fall 2005 average time to graduate of 4.2 years at Storrs (ranks 4th among public research universities)
- ▶ Fall 2008 4-year graduation rate is 67% at Storrs
- ▶ Fall 2006 6-year graduation rate is 82% at Storrs
- ▶ Undergraduate degrees at all campuses increased 75% since fall 1995 (2,951 to 5,174)
- ▶ Graduate/Professional degrees at all campuses increased 40% since fall 1995 (1,757 to 2,462)



23

## Freshman Application Trends (Storrs & Regionals)

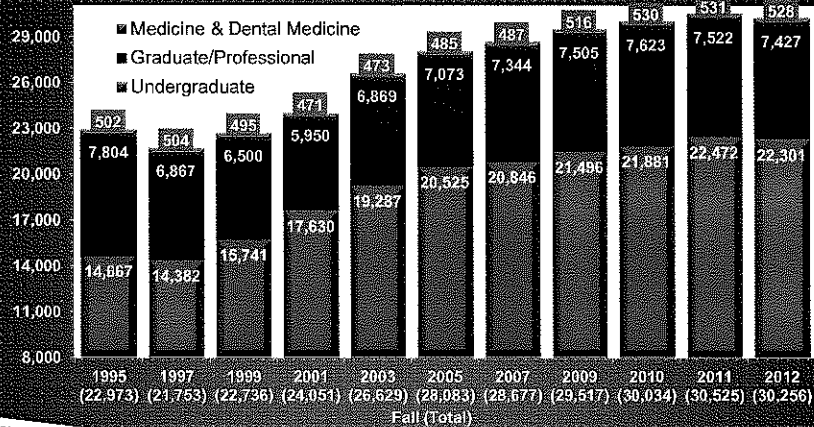
Applications at all campuses have increased 190% from Fall 1995 to Fall 2012



24

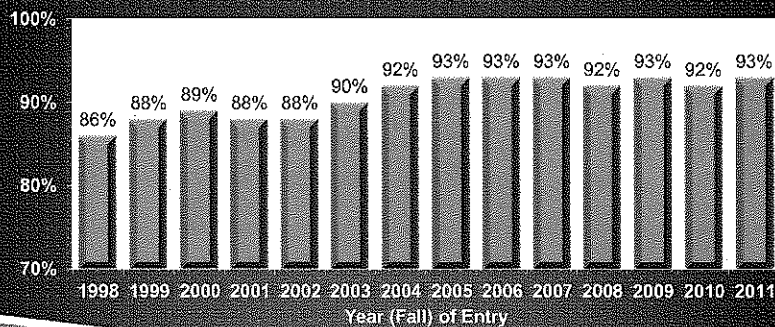
## Total Student Enrollment

Undergraduate enrollment has increased 52% from 1995 to 2012



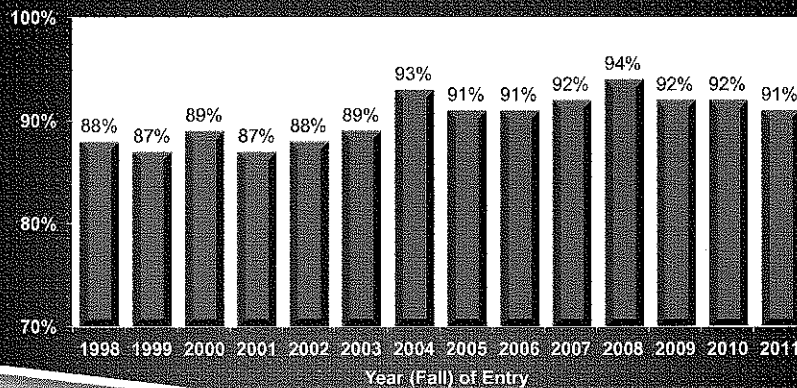
## Freshmen Retention Trend (Storrs)

- Fall 2011 rate ranks 14th among the 58 Public Research Peer Universities
- Fall 2009 freshman retention rate is substantially higher than the 82% average for 383 colleges & universities in the national Consortium for Student Retention Data Exchange



## Minority Freshmen Retention Trend (Storrs)

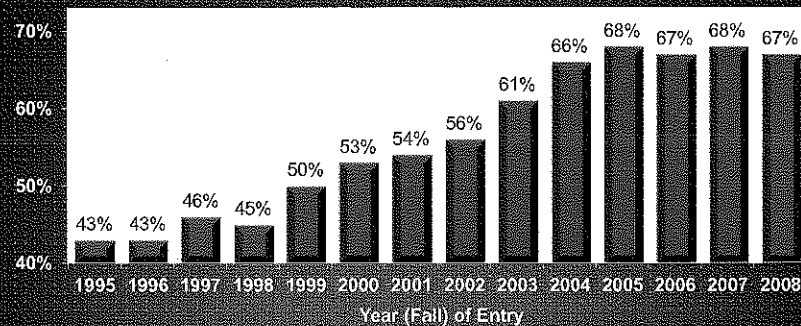
Fall 2009 minority freshman retention rate is also substantially higher than the national 80% average (CSRDE)



## 4-Year Graduation Trend (Storrs)

UConn's ranking among the 58 Public Research Peer Universities:

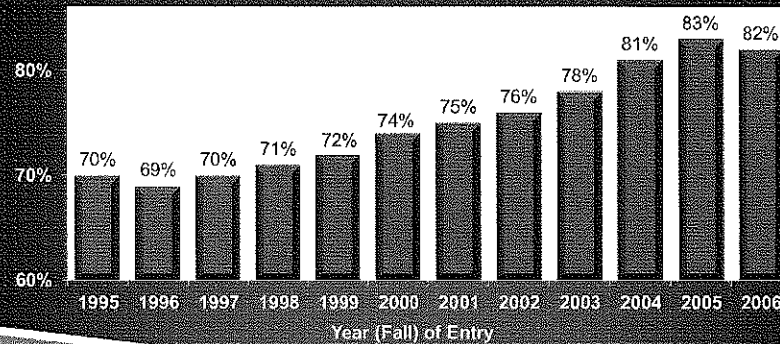
- Fall 2005 4-year graduation rate of 68% ranks 5th
- Fall 2005 average time to graduate of 4.2 years ranks 4th



## 6-Year Graduation Trend (Storrs)

UConn's ranking among the 58 Public Research Peer Universities:

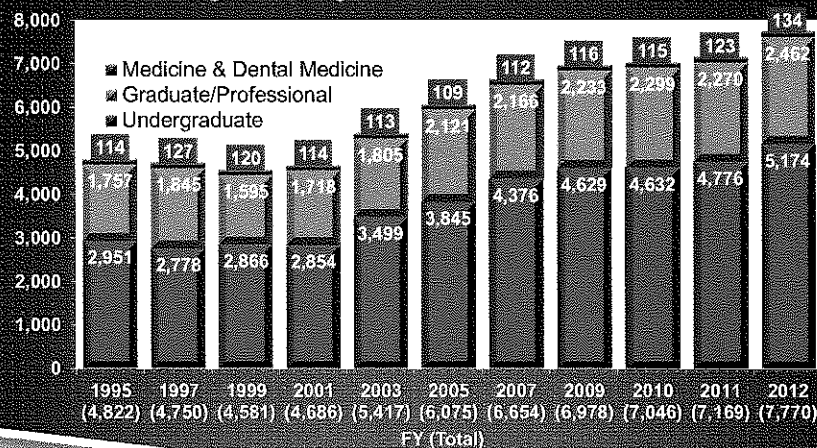
- Fall 2005 6-year graduation rate of 83% ranks 12th
- Fall 2005 6-year minority graduation rate of 74% ranks 21st



29

## Degrees Awarded

Undergraduate degrees have increased 75% since 1995



30





# UConn<sup>fact</sup>sheet 2013

## Campus Information

Founded 1881

Main Campus: Storrs

5 Regional Campuses:

Avery Point, Greater Hartford, Stamford, Torrington, Waterbury

School of Law and Graduate Business Learning Center: Hartford

School of Social Work: Greater Hartford Campus

Health Center: Farmington

(Schools of Medicine & Dental Medicine, graduate programs, medical & dental clinics & John Dempsey Hospital)

Land Grant & Sea Grant college, Space Grant consortium institution

Storrs & Regionals = 4,067 acres; Health Center = 205 acres

## UConn 2000

As of October 2012:

- 108 projects totaling \$2.1 billion in bonds have been authorized
- \$2.0 billion in construction-related contracts issued from all fund sources
  - 64% of funds to Connecticut contractors
  - 19% of funds to set-aside contractors
- In excess of 10 million square feet of new and renovated space completed
- Bond Credit Ratings by Fitch, Moody's and Standard & Poor's remain consistently strong

## Academic Programs & Degrees

14 Schools & Colleges

Agriculture & Natural Resources, Business, Dental Medicine, Neag Education, Engineering, Fine Arts, Graduate, Law, Liberal Arts & Sciences, Medicine, Nursing, Pharmacy, Ratcliffe Hicks, Social Work

8 undergraduate degrees: 102 majors

17 graduate degrees: 88 research and professional practice fields of study

5 professional degree programs (J.D., LL.M., M.D., D.M.D., Pharm.D.)

Degrees 2011-12

7,770

Bachelor's	5,149
Master's	1,573
Doctorates	341
Law (J.D., LL.M.)	234
Pharm.D.	94
Medicine	87
Dental Medicine	47
Graduate/Professional Certificates	141
6 Yr. Education	79
2 Yr. Agriculture	25

Degrees by: Female 53%

Minority 19%

## Total Fall 2012 Student Enrollment: 30,256

17,528 Undergraduate at Main Campus

4,773 Undergraduate at Regional Campuses

**22,301 Subtotal Undergraduate**

6,613 Graduate (M.A./Ph.D., incl. 321 at Health Center)

623 Law

191 Pharm.D.

359 Medicine

169 Dental Medicine

**7,955 Subtotal Graduate/Professional**

## Fall 2012 Entering Freshmen at Main Campus: 3,114

- 48% were in top 10% of high school class
- 84% were in top 25% of high school class
- 63 valedictorians and 63 salutatorians
- 213% more minority freshmen than in Fall '95
- Since 1995: 1,538 valedictorians and salutatorians enrolled at all campuses

## Student Characteristics Fall 2012

	Undergraduate 22,301	Grad/Professional 7,955
Female	50%	51%
Minority	26%	17%
International <sup>1</sup>	3%	18%
Connecticut Residents <sup>2</sup>	81%	70%

<sup>1</sup> 98 countries were represented in the Fall 2012 international student population.

<sup>2</sup> 76% of undergraduates on Main Campus are Connecticut residents.

All 169 Connecticut towns and 46 of 50 states are represented in the Fall 2012 total undergraduate student population.

## SAT Scores and Retention & Graduation Rates

2012 SAT Scores (Critical Reading and Math)	National High School	Connecticut High School	Storrs Entering Freshmen
	1010	1018	1226

Main Campus

Freshmen Retention: 1-Year Rate

All

93%

Minority

91%

Graduation:

4-Year Rate

67%

67%

59%

6-Year Rate

82%

82%

77%

UConn (Main Campus) ranks 12 out of 58 public research universities in graduation rate for all freshmen and 21 out of 58 public research universities for minority freshmen. (Sources: *U.S. News 2013 America's Best Colleges & 2011 IPEDS Graduation Rate Survey*) UConn (Main Campus) average time to graduate is 4.2 years among those who graduate within 6 years, and ranks 4 out of 58 public research universities.

## Total Undergraduate Student Cost 2012-13

	In-State	Out-of-State
Tuition, Fees, Room <sup>1</sup> & Board <sup>2</sup>	\$22,502	\$40,334
Tuition & Mandatory Fees	11,362	29,194
Tuition Only	8,712	26,544

<sup>1</sup> 72% of Main Campus undergraduates live in campus housing (117 residential halls).

<sup>2</sup> Board rate shown reflects most popular plan available.

## Student Financial Aid FY 2012

Financial Aid Support: \$406.5 million

	Main Campus/ Regional <sup>1</sup>	Health Center
Scholarships & Grants	\$137.9 million	\$5.3 million
Loans	177.1 million	16.1 million
Student Employment	21.3 million	
Tuition Waivers	48.8 million	

<sup>1</sup> 40.1% of all tuition dollars are dedicated to financial aid. Approximately 21,000 students received financial aid packages in FY 2012.

## Total Current Funds Budget FY 2013: \$1.9 billion

### STORRS & REGIONAL CAMPUSES

Revenue	In Millions
State Appropriation	\$205.6
Fringe Benefits	86.9
Student Tuition & Fees	533.0
Gifts, Grants & Contracts	176.1
Sales/Services - Auxiliary Enterprises	34.0
Sales/Services - Educational	17.5
Investment Income	0.8
<b>Total</b>	<b>\$1,053.9</b>
Expenditures	
Academic Services	\$434.8
Research Services	78.1
Student Services	383.6
Operating, Support & Physical Plant Services	158.4
<b>Total<sup>1</sup></b>	<b>\$1,054.9</b>

### HEALTH CENTER

Revenue	In Millions
State Appropriation	\$112.7
Fringe Benefits	48.0
Tuition & Fees	18.5
Gifts, Grants & Contracts	84.9
Interns & Residents	55.2
Net Patient Care	365.2
Correctional Managed Care	85.6
All other revenues	41.3
<b>Total</b>	<b>\$811.4</b>
Expenditures	
Hospital & Health Services	\$428.6
Academic Services	168.4
Research Services	94.6
Operating, Support & Physical Plant Services	119.8
<b>Total<sup>1</sup></b>	<b>\$811.4</b>

<sup>1</sup>The net loss is due to a planned use of fund balance.

## Private Giving FY 2012

- Total Endowment: At the close of FY 12, the University's endowment, which stood at \$42 million at the start of 1995, was valued at approximately \$329 million.
- In FY 12, private fundraising receipts totaled \$60 million: \$27.4 million for Storrs and the regional campuses, \$10.9 million for the Health Center, and \$21.8 million for Athletics.
- Alumni contributed \$21 million in FY 12. Additional commitments included \$19 million from parents and other individuals, and \$20 million from corporations, private foundations and other organizations.

## Staff Characteristics (Fall 2012)

Number of Full-time & Part-time Faculty & Staff: 9,872

	Main Campus/ Regional	Health Center
Full-time & Part-time Faculty & Staff	<b>4,624</b>	<b>5,248</b>
Full-time Faculty & Staff	4,405 (95%)	4,002 (76%)
Part-time Faculty & Staff <sup>1</sup>	219 ( 5%)	1,246 (24%)
Full-time Faculty	<b>1,377</b>	<b>505</b>
Tenured & Tenure Track	1,061 (77%)	190 (38%)
Non-Tenure Track	316 (23%)	315 (62%)
Full-time Staff	<b>3,028</b>	<b>3,497</b>
Full-time & Part-time Faculty		
Female	40%	39%
Minority	22%	28%
Full-time & Part-time Staff		
Female	58%	77%
Minority	17%	24%

<sup>1</sup>An additional 686 adjunct lecturers teach one or more courses at Storrs and Regional Campuses.

### Staff Covered by Collective Bargaining Agreements:

Main Campus & Regional Campuses	90%
Health Center	80%

## Research, Training & Public Service

FY 12 external funding, sponsored activities: \$207.4 million (excluding financial aid):

Main & Regional Campuses:	\$122.5 million (59%)
Health Center:	\$ 84.9 million (41%)

### Total by Funding Source

Federal: 73%    State: 11%    Private/Other: 16%

### Sponsored Activities at Main & Regional Campuses

Research	80.9%
Education and Training Programs	1.7%
Public Service	17.4%

### Sponsored Activities at the Health Center

Research	93.0%
Industry Support	1.2%
Education and Training Programs	3.6%
Other	2.2%

## UConn Alumni

- More than 217,000 total alumni worldwide
- More than 121,000 alumni live in Connecticut